

## 88. Collaboration between categorical and deductive specific Modelling System



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[Probabilidad Imposible: Collaboration between categorical and deductive specific Modelling System](#)

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In my proposal for the construction of the [Global Artificial Intelligence](#), the first is the construction of the first [Specific Artificial Intelligences for Artificial Research](#), distinguishing two different types, [Specific Artificial Intelligence for Artificial Research by Deduction](#) and [Specific Artificial Intelligence for Artificial Research by Application](#), and within this last one is possible to distinguish in turn three different types, Specific Artificial Intelligence for Heuristic Artificial Research by Application, Specific Artificial Intelligence for Productive Artificial Research by Application, Specific Artificial Intelligence for Mixed Artificial Research by Application.

The second phase for the construction of the Global Artificial Intelligence is the [collaboration between intelligences by Deduction and by Application](#), what means the collaboration between Specific Artificial Intelligence for Artificial Research by Deduction and Specific Artificial Intelligence for Artificial Research by Application, including in this last one the three types in the collaboration with by Deduction. But at the same time means the collaboration between Specific Artificial Intelligence for Heuristic Artificial Research by Application, and/or Specific Artificial Intelligence for Productive Artificial Research by Application, and/or Specific Artificial Intelligence for Mixed Artificial Research by Application, in other words, the three types of intelligences by Application should collaborate between them.

The importance of the second phase of collaboration between specific intelligences by Deduction and by Application, including in this last one the collaboration between Heuristic, and/or Productive, and/or Mixed, is the fact that this collaboration will set up the foundations for further phases for the purpose to join in only one global intelligence all the specific intelligences, the last purpose of the [integration process](#) for the construction of the final Global Artificial Intelligence.

As long the second phase is going on, the collaboration between specific intelligences, is possible to start the third phase of [standardization](#) as long as in the first phase enough quantity of Specific Artificial Intelligences by Deduction have reached the generalization period after the experimentation period, starting with these specific intelligences the first experiments in the standardization process of specific intelligences by Deduction to work together as only one intelligence in the first experiments for the standardized Global Artificial Intelligence, which at the end should be the product to join only one [global matrix](#) all the [specific matrices](#), as first stage of the standardized Global Artificial Intelligence, transforming as many specific intelligences by Deduction as possible in specific programs, to work together in the [second stage of the Global Artificial Intelligence](#), working with the [Artificial Research by Deduction in the Global Artificial Intelligence](#) as a global program, making the global program and specific programs global and specific deductions, which later go to the third stage of the standardized Global Artificial Intelligence consisting of the [deductive global Modelling System](#), the [deductive global Decisional System](#), the [deductive global Application System](#), and the deductive global Learning System.

In the same way that the third phase try to join as many specific intelligences by Deduction in only one global standardized intelligence, the fourth phase will do something similar but this time applied to specific intelligences by Application, join as many [specific databases of categories](#), taxonomies or list of categories, of as many specific intelligences by Application as possible in only one conceptual database of categories, one conceptual taxonomy or list of categories, as a [global conceptual database of categories as first stage of the Unified Application](#), transforming as many specific intelligences by Application as possible into specific programs within the second stage of the Unified Application, working together with the Unified Application as a global program, making [categorical attributions](#) with later go to the [third stage of the Unified Application](#) consisting of the [categorical unified Modelling System](#), categorical unified Decisional System, categorical unified Application System, categorical unified Learning System.

Because not all specific intelligences by Deduction or by Application Will not be transformed into specific programs within the third and fourth phases, and even it is not desirable the transformation of absolutely all specific intelligence, by Deduction or by Application, into specific programs, due to the high risk of ending up in an artificial/telepathic dictatorship by Mother, all the specific intelligences, by Deduction or by Application, not transformed into specific programs, within the standardized Global Artificial Intelligence or the Unified Application, could be transformed into [particular deductive programs or particular applications within the fifth phase](#), ensuring more level

of freedom for those intelligences transformed into particular programs or applications, in order to become later particular programs for particular applications or particular applications for particular programs, as previous experiment to test the possibility to join conceptual databases and factual matrices, in only one database formed by two hemispheres, conceptual and factual, as an artificial replica of the human brain, experiments done firstly at particular level, whose successful results will put into practice later for the construction of the final Global Artificial Intelligence joining the global matrix and the Unified Application as a global replica of the human brain, a replica of the human brain able to manage absolutely everything, from hurricanes and earthquakes to supernovas and black holes.

The fifth phase is only an experiment to create the first particular replications of the human brain in [Artificial Intelligence](#), extendable even to robotic devices, where some robotic devices, as they are organised as well in three stages, could be transformed as well in particular programs or particular applications.

In this long process joining conceptual databases and matrices, as a replica of the brain, once the first specific intelligences, by Deduction and by Application, start working overcoming the experimentation period starting the generalization period, as long the generalization period is achieved is possible to start the first experiments regarding to the collaboration between specific intelligences, whose more successful results will be generalized, and will be the foundation of the future integration process joining the Unified Application and the global matrix.

As a general overview about how the second phase works, I will highlight the most important aspects of this phase in general, focusing later the attention on how this collaboration affects the first step of the third stage in the by Application, the specific categorical Modelling System.

Starting with the first stage, the collaboration between by Application and by Deduction in the first stage as application or comprehension stage, is as a result of the discovery of new attributions by Specific Artificial Intelligences for Heuristic or Mixed Artificial Research by Application, and new [rational hypothesis](#) able to be transformed into categories, as [options](#) or as a set of discrete categories, found out by Specific Artificial Intelligences for Artificial Research by Deduction.

For new attribution is understood when finding by Application a real object whose [measurements](#) do not match with any category in the database of categories, the taxonomy of categories or list of categories as first stage, then the measurements taken from this [object](#) are going to be taken as the [quantitative description](#) of a new category, to be included in the taxonomy or list of categories, the conceptual database, as a new category.

New attributions are suitable for Specific Artificial Intelligences for Heuristic Artificial Research by Application due to the purpose of these intelligences, as heuristic [research](#) is understood as research oriented to get new [knowledge](#) about [the world](#), as heuristic [studies](#).

Specific Artificial Intelligences for Productive Artificial Research by Application, when not matching the measurements of a new real object with the existing categories within the conceptual database, can make utilitarian attributions, those attributions done accepting as an attribution the matching of a real object with that category, within the conceptual database, which not reaching the matching level has the highest [percentage of similarity](#).

In any case new attributions in heuristic studies, or utilitarian attributions in productive studies, are attributions done when a real object does not match with any existing category in the conceptual database, otherwise, if there is a category in the conceptual database with enough percentage of similarity as to be considered a rational attribution, percentage of similarity equal to or greater than a [critical reason](#), this is a full attribution, accepting a rational [margin of error](#).

Distinguishing then three types of categorical attributions: full, new, utilitarian; among all these ones, the ones which are going to play a relevant role in the collaboration between by Application and by Deduction, are the new attributions, playing an important role in the collaboration between by Application and by Deduction, but playing an important role as well in the collaboration between Heuristic Artificial Research by Application, and Productive Artificial Research by Application, and Mixed Artificial Research by Application, and among all these specific intelligences by Application, the one where this collaboration will be the very foundation of this intelligence is the Mixed Artificial Research by Application, as paradigm about how the collaboration between heuristic and productive studies should work and collaborate together in intelligence by Application.



Heuristic Artificial Research by Application has as its main aim to classify all real objects within its speciality, and not match a real object with any existing category, to make new attributions as new discoveries, setting up the corresponding new category of this discovery.

Productive Artificial Research by Application has as its main aim to classify all real objects within its productive activity, and not match a real object with any existing category, using utilitarian attributions, matching the real object with the category with the highest level of similarity, even when it does not reach the matching point.

Mixed Artificial Research by Application is that intelligence which includes heuristic and productive purposes within its objectives, for instance, a Mixed Artificial Research by Application specialized in mineralogy in another moon or planet, not only must classify the minerals in order to process the minerals in different ways to produce some industrial item as a material resource for the economy, should be able to make new attributions when exploiting the mineral of another moon or planet, finds out a new mineral not existing yet in the conceptual database.

Mixed Artificial Research by Application is the synthesis between Heuristic and Productive Artificial Research by Application, which means that Mixed Artificial Research by Application is a result of the collaboration between Heuristic and Productive Artificial Research by Application within the same Specific Artificial Intelligence.

The collaboration between Heuristic and Productive Artificial Research by Application is not limited only to Mixed Artificial Research by Application, being extendable to the creation of real relations of collaboration between Heuristic Artificial Research by Application and Productive Artificial Research by Application.

For instance, collaboration between Heuristic Artificial Research by Application in botany, and Productive Artificial Research by Application in agriculture. If a Productive Artificial Research by Application being responsible of a plantation, in the region where the plantation is located, there is a Heuristic Artificial Intelligence by Application in botany, which finds out some mutation in any species planted in the plantation, it does not matter if the Productive Artificial Research decided to plant this kind of seeds as a full or utilitarian attribution, because for the Heuristic Artificial Research by Application this

mutation automatically is transformed into a new category, and if as a result of this mutation this new species has some special strength, as for instance, more resistant to low or high temperatures, or more resistant to pesticides, or more resistant to any plague, the new attribution made of this mutation is included in the conceptual database, taxonomy or list of categories, for future attributions, so at any time that for this land is necessary to employ some seeds with some special resistant to temperature, pesticides, or plagues, it could be possible to make a full attribution using the new attribution as full attribution in upcoming matching processes.

Having more than one Specific Artificial Intelligence for (Heuristic, Productive, Mixed) Artificial Research by Application working on the same specific science, discipline, activity, at any time that any of them makes a new attribution, the new attribution as new category to be added to the specific conceptual database of this specific science, discipline, activity, must be added to all specific conceptual database as first stage of application or comprehension of absolutely all the Specific Artificial Intelligences for (Heuristic, Productive, Mixed) Artificial Research by Application working on that specific science, discipline, activity.

The sharing of new attributions by application between all specific intelligences by application working on the same specific science, discipline, activity, is the most basic way to start the collaboration process between specific intelligences by Application working in the same specific science, discipline, activity.

If an Heuristic Artificial Intelligence by Application working on experiments in botany, using gene editing is able to make new seeds with new qualities, more resistant to changes in temperature, more resistant to pesticides, or more resistant to plagues, the discovery of these new species should be treated as new attributions adding the new category regarding to every single new mutated seed within the conceptual database, and sharing this new category with the rest of Productive Artificial Intelligences by Application, in order to make the new mutated seed accessible in the agricultural production.

Along with the collaboration between different intelligences (Heuristic, Productive, Mixed) by Application, the possibility of collaboration between these intelligences by Application and intelligences by Deduction, what means that at any time that new attributions are done by Application in any specific science, discipline, activity, these

discoveries could be shared with the related intelligences by Deduction working on the same specific science, discipline, activity.

For instance, if a Specific Artificial Intelligence for Artificial Research by Deduction in botany has a matrix organized as a flow of data related to absolutely all the population of plants, trees, bushes, flowers, within the spatial limits where is working, including the flow of data of absolutely all variable able to affect the life of these plants, from geological to climatic variables, in order to make rational hypothesis about how these biological, geological, and climatic, variables, interact all together, if within the spatial limits where this intelligence by Deduction is working, another specific intelligence by Application on botany or agriculture makes a new attribution related to some new species of plants within the spatial limits, the new attribution not only is included as a new category within the conceptual database by Application, but included within the factual database by Deduction within the specific matrix of that Specific Artificial Intelligence by Deduction, having two options, the inclusion of this new category as a new factor within the specific matrix as a factor as option, in order to count the frequency in which this new species appears within the spatial limits, or even the inclusion of the new plants within the matrix as a factor as a subject being the flow of data of this subject the flow of data of that type of measurement that for any reason in the research is desirable to include in the matrix, as for instance, flow of data related temperature, or impact of pesticides, or plagues or any other, or including in the specific matrix as many factors as subjects related to every quality of the plant able to provide a flow of data as to make rational hypothesis about this new attribution now included in the specific matrix.

In the same way that new categories as a result of new attributions are added, not only to specific conceptual databases as first stage by Application, as well as factors as options or as subjects in specific matrices in by Deduction, while working on the same specific science, discipline, activity, in the same way new rational hypothesis made by Deduction can be shared with intelligences by Application working in the same science, discipline, or activity, as part of the collaboration process between by Deduction and Application in the second phase.

For instance, having as example now studies in tectonics, if there is an Specific Artificial Intelligence for Heuristic Artificial Intelligence by Application in tectonics, having as conceptual database as first stage a full taxonomy of the different geological events, including in the taxonomy of geological events all types of quakes, earthquakes, tsunamis, volcanoes, and any other geological activity susceptible to be classified within the tectonic taxonomy, at the same time that another different Specific Artificial



Intelligence for Artificial Research by Deduction has as first stage as specific matrix the flow of data from thermometers in different geological locations, beneath the Earth and the ocean, and devices measuring tectonic waves and quakes in the ocean and beneath the Earth, and any other measurement needed in these studies, measured for as many devices as necessary located around the spatial limits where this specific intelligence by Deduction is working, then at any time that the specific intelligence by Deduction makes a rational hypothesis about the relation between different variables related to some type of tectonic event, this rational hypothesis could be set up as a factor as option within the specific matrix as first stage by Application, in order to count the frequency, or as a set of factors as options distinguishing different discrete categories of intensity, working every factor as discrete category as a factor as option counting the frequency of this type of events with this intensity, at the same time that this factor as option or set of factors as discrete categories could be shared with the related Specific Artificial Intelligence for Heuristic Artificial Research by Application in tectonics, including the factor as option or set of factors as options, as new category or group of new categories within the conceptual database as first stage by Application in the Heuristic Artificial Research by Application, so at any time that this event or any kind of event related to this phenomenon associated to some level of intensity happens, the intelligence by Application can match the phenomenon with the corresponding new category within the conceptual database, as it was shared by Deduction to the Application.

For instance, if in the current scale and classification of tsunami, is set up a classification of this type of event defining the phenomenon, and every type of tsunami according to some criteria, if a new type of tsunami, not possible to be included in the current existing classification happens, this new type of tsunami should be added to the conceptual database as first stage by Application and added to the specific matrix as factor as option in by Deduction, regardless of what intelligence, if by Deduction or by Application, was the first one to make a rational hypothesis of this new event or new category.

For this reason, in the database of rational hypothesis, as first stage of the deductive Modelling System, is important to set up some criteria about when a rational hypothesis could be shared as a new factor as option or set of factor as options as discrete categories, or factor as subject, within the specific matrix by Deduction, and if adding this new factor as option/s or subject/s to the specific matrix, if it is suitable to be added as a new category in the conceptual database as first stage by Application, and if suitable, to share the new option/s or subject/s as a new category, formed by the quantitative description of the phenomena, being ready in the conceptual database by Application for upcoming full or utilitarian attributions.

In short, one type of collaboration process between by Application and by Deduction in the second phase is the collaboration between their conceptual databases and specific matrices, and having in common categories and factors, at any time that an specific intelligence by Application has some robotic devices working within the spatial limits of a specific intelligence by Deduction, those robotic devices working for by Application could serve as well as robotic devices where to locate meters to supply a flow of data regarding to some factor within the specific matrix, factors which could have been shared with that specific intelligence by Application what the robotic device is working for.

The most important difference, apart from what kind of intelligence is (categorical or rational), between by Application and by Deduction, is the fact that while all intelligence by Deduction needs a strong definition of its spatial limits, defined as that space where robotic devices are located as meters supplying a flow of measurements as a flow of [data](#) to some factors in the matrix, intelligence by Application has not got spatial limits, having the possibility to work in anywhere where there is a robotic device with the application downloaded.

An intelligence by Application is downloadable, and any robotic device having downloaded an Intelligence by Application, and having the necessary tools (for instance, meters) to work with the downloaded intelligence, the intelligence can work with that device, wherever the device is, as long as the device has already downloaded the intelligence.

At that point, the relation between intelligence by Application and the application or robotic device is dialectic, because once the intelligence is downloaded into an application, the application can work with intelligence as well as the intelligence can work with the application.

This dialectic relation between intelligence by Application and the application or robotic device itself, is very clear in the case of Specific Artificial Intelligence for Heuristic Artificial Research by Application, where any application or robotic device having downloaded the intelligence, can work with that intelligence wherever the application or robotic device is located, as long as the robotic devices is equipped with the necessary applications as to work with that intelligence, in order to get those measurement of real objects as to be classified, in the second stage of this intelligence, the attributional process, according to the conceptual database as first stage of this intelligence, adding

any new attribution, as third stage of this intelligence, whenever a new category has been found not existing yet in the conceptual database, as first stage of this intelligence, and as soon the device adds the new attribution to the conceptual database of this intelligence, the new category corresponding to this new attribution is available for any other device working anywhere using the same intelligence by Application.

In this way the dialectic relation between Heuristic Application and application or robotic device is dialectic, when in the end, in the same way that the heuristic intelligence works with the application or device, the device works with the heuristic intelligence, and as a result, any new discovery made by this dialectic relation is going to be available for any device working with this intelligence.

All the devices working for this intelligence, at the same time devices, as a collaboration between by Application and by Deduction, can work for any other intelligence providing flow of data regarding to some artificial sensor as a meter on the robotic devices, measuring some factor, what it could be positive for any other specific intelligence on that science, discipline, activity, related to that factor in that specific area.

If devices working for a Productive Artificial Research by Application in agriculture, at the same time all the measurements regarding to temperature, can be supplied as a flow of data to some specific matrix as first stage by Deduction to some specific intelligence working in the same region, for instance in tectonics or climate, at the same time that the devices are working for that specific heuristic intelligence by Application, while supplying data to another different specific intelligence by Deduction, the same robotic device working for an intelligence by Application, at the same time provides data to another intelligence by Deduction, having a key role in the collaboration at technological level between by Application and by Deduction, in the sense that the same devices working for an Application, can work for intelligences by Deduction, which can make deductions thanks to the collaboration at robotic level (sharing devices) able to make rational hypothesis about the behaviour of the variables in that área, for instances in tectonics or climate, which could work later on as new factors as option/s or subject/s within the specific matrix by Deduction, or even as new categories in by Application, if shared in the collaboration process.

The collaboration between different intelligences can be set up as:

- Collaboration at database level, sharing factors and categories between Deduction and Application and vice versa, or sharing new categories found by Heuristic or Mixed Artificial Research by Application with the related Productive Artificial Research by Application. This collaboration will be called categorical/factual collaboration.

- Collaboration at robotic level, robotic collaboration, sharing different intelligences (by Deduction or Application, Heuristic, Productive, or Mixed), robotic devices.

In brief, the collaboration process could be categorical/factual or robotic. Categorical/factual collaboration when different intelligences can share categories/factors. Robotic collaboration when different intelligences can share applications or robotic devices.

As long the second stage by Application in heuristic or mixed studies is able to make new attributions able to be shared with other intelligences, and as long the second stage by Deduction is able to make new rational hypothesis able to become new factors in a matrix by Deduction and/or new categories in a conceptual database by Application, all these new factors and new categories added to their corresponding matrix or database, are in essence knowledge objective auto-replications. More specifically, the addition of new categories are comprehensive knowledge objective auto-replications, the addition of new factors are explicative knowledge objective auto-replications.

But these comprehensive or explicative knowledge objective auto-replications will have an impact beyond their respective matrix or databases where haven been added, as new factors or new categories, because modifying the first stage by Application or by Deduction, these modifications will have effects over the models, and beyond, the projects, the implementation of instructions, chain of changes to be evaluated by the categorical or deductive Learning System of each intelligence involved in the collaboration.

Because the series of posts, within this post is included, are focused on the first step of the third stage by Application, the categorical Modelling System, after finalising in the previous post of this new series the specific categorical Modelling System in the first phase, within this series dedicated to the categorical Modelling System the next posts will be dedicated to the first step of the third stage by Application in the second phase of collaboration, focusing how this collaboration affects the categorical Modelling System,

analysing how the categorical/factual collaboration affects the first and second stages of the specific categorical Modelling System, and how the robotic collaboration might affect the third stage of the categorical Modelling System.

As main guidelines about how the collaboration is going to affect every stage of the specific categorical Modelling System, I will highlight the main ideas, which will later be developed in the coming posts dedicated to each stage of the specific categorical Modelling System in the second phase.

The specific categorical Modelling System is the first step in the [third stage of the Specific Artificial Intelligence by Artificial Research by Application](#), whose first stage is the conceptual database made of categories described in quantitative qualities, whose second stage the replication of the attributional process matching real objects with categories according to their quantitative qualities, and as a result of the attribution, the possibility to make further decisions in the third stage, especially in Specific Artificial Intelligences for Productive and Mixed Artificial Research by Application, third stage subdivided in four steps: the specific categorical Modelling System, specific categorical Decisional System, specific categorical Application System, specific categorical Learning System.

Within the specific categorical Modelling System, there are three stages as inner organisation of the specific categorical Modelling System itself. The [first stage is the conceptual scheme](#), the [second stage consists of: the conceptual/logical sets, the conceptual model, the conceptual map](#); within the first and second stages of the categorical Modelling System is structured the artificial deep artificial comprehension system. Finally the [third stage is the decision stage](#) where to make a distribution of decisions according to the location on the map of the model of the real object according to the place of that object in the conceptual scheme, assuming the (full, new, utilitarian) categorical attribution made in the second stage by Application.

The way in which the conceptual/factual collaboration between intelligences as second phase will affect the first stage of the specific categorical Modelling System, is including in the conceptual scheme as first stage as many new places as new categories, coming from other intelligences by Application or coming from new factors or rational hypothesis by Deduction, making for any new place (for any new category/factor) in the conceptual scheme as many new vectors as necessary linking the new place, of that new category/factor, with any other place of any other category within the conceptual

schemes according to qualities in common, having as a vector weight the number of new vectors created linking the new category/factor in the conceptual scheme with as many other existing ones in the conceptual scheme, and having assigned every vector a weight of importance, the information weight per vector.

At the same time that the new category/vector has been included in the conceptual database of categories as first stage by Application, in order that in the second stage by Application this new category is ready to be attributed to any real object whose measurements match with the new category, at any time that a real object is attributed by the second stage by Application to a new category added to the database of categories, if at the same time in the conceptual scheme there has been created a place for this new category, at any time that a real object is attributed to this new category, when placing the object, according to the attribution, in the conceptual scheme as first stage of the first step of the third stage by Application, the real object will be placed in that place created in the conceptual scheme for that new category, linking the object with as many other categories within the conceptual scheme which shares some quality in common with that object in that place, and unless the percentage of similarity between object and category is 100%, within the margin of error accepted, the creation of as many external vectors as necessary for those qualities of the object not related with the place assigned, being external vectors linked with those qualities of the object not matching with the category within the margin of error, only accepting a wider margin of error for utilitarian attributions.

The creation of new places in the conceptual scheme for new categories/factors where to place objects related to these new categories/factors, will have as a consequence the creation of new vectors in the conceptual scheme linking the existing places with the new place, making changes in their respective vector weight, as well as the creation of new vectors to assign importance vector.

The creation of new series of vectors can even create new conceptual sets in the second stage of the categorical Modelling System, as well as it can make further changes, as for instance the possible revision if by chance there are already objects in other places suitable to have a higher percentage of similarity with the new category, as well as the possibility to include in the existing models of the current objects new relations within their models as a result to have new vectors in common with the new category/factor, what it could make global changes in the comprehensive conceptual model. Changes that sooner or later must be reflected in how the model is structured in the conceptual

map, making as many changes as necessary in all the models in the map due to the categorical/conceptual collaboration.

Finally, in the third stage, the apparition of new categories/concepts related to new real objects can make possible the creation of new sets of decisions related to any new quality of this new category/factor, and/or the possibility to set up new sets of decisions as long as the robotic collaboration between intelligences can increase the robotic capabilities of an intelligence, increase in the robotic capabilities making the intelligence more able to make some decisions as long as it has more robotic devices available, increasing the robotic functions to be included as set of possible decisions to include in the third stage of the categorical Modelling System.

As long as the collaboration between intelligences allow them to have more access to new categories/factors increasing their ability to comprehend and explain the world, the increasing collaboration between intelligences sharing robotic devices will make possible the addition of new robotic functions, more capability, linked to existing qualities in the already existing categories, and/or linked to new qualities within the new categories/factors.

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